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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Takeshi NISHINO, et al.

Application No.: 10/643,953

Group Art Unit: 2617

Filed: August 20, 2003

Examiner: Pierre Louis Desir

For: POINTING DEVICE HAVING IMPROVED OPERABILITY, ITS CONTROL METHOD
AND MOBILE TELEPHONE

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief-Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

In a Notice of Appeal filed March 10, 2009, the applicants appealed the Examiner's December 10, 2008 Office Action finally rejecting claims 1, 9-10, 17, 20, 23-25, and 27-35. Appellant's Brief, together with the requisite fee set forth in 37 C.F.R. § 1.17, is submitted herewith. This Appeal Brief is accompanied by the required appeal fee set forth in 37 C.F.R. § 41.20(b)(2).

Should any additional fees be required or an overpayment of fees made, please debit or credit our Deposit Account No. 19-3935, as needed.

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I. REAL PARTY IN INTEREST (37 C.F.R. § 41.37(c)(1)(i))

The real party in interest is Fujitsu Component Limited, the assignee of the application.

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II. RELATED APPEALS AND INTERFERENCES (37 C.F.R. § 41.37(c)(1)(ii))

Appellant, appellant's legal representative, and the assignee do not know of any prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

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III. STATUS OF CLAIMS (37 C.F.R. § 41.37(c)(1)(iii))

Claims 1, 9-10, 17, 20, 23-25, and 27-35 have been finally rejected and are on appeal.

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IV. STATUS OF AMENDMENTS (37 C.F.R. § 41.37(c)(1)(iv))

Appellant's Request for Reconsideration filed January 22, 2009 did not amend any of claims 1, 9-10, 17, 20, 23-25, and 27-35 and was entered for purposes of Appeal as indicated by the Advisory Action mailed February 19, 2009.

V. SUMMARY OF CLAIMED SUBJECT MATTER (37 C.F.R. § 41.37(c)(1)(v))

Independent claim 1 recites a pointing device (for example, pointing device 2 in Figures 14-15) that can be operated to move an operational object (for example, a cursor, a pointer, or a selection frame, such as is illustrated in Figures 2a and 4a) on a display screen (for example, display screen 52 in Figures 12a-12b) in any 360-degree direction (see page 9, lines 14-34). The pointing device of claim 1 includes a control unit (for example, control unit 12 in Figure 1) that changes an operation mode of the pointing device according to a positional orientation of contents (for example, icons 54 in Figure 2a) displayed on the display screen at the time said pointing device is operated (see page 10, line 1 through page 11, line 20). Furthermore, claim 1 provides that the control unit determines a direction in which the operational object can be moved on the display screen according to the operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen (see page 12, lines 30-37; page 15, lines 6-13).

Independent claim 23 recites a method for controlling a pointing device (for example, pointing device 2 in Figures 14-15) that can be operated to move an operational object (for example, a cursor, a pointer, or a selection frame, such as is illustrated in Figures 2a and 4a) on a display screen (for example, display screen 52 in Figures 12a-12b) in any 360-degree direction. The method of claim 23 includes changing an operational mode of the pointing device in advance according to a positional orientation of contents (for example, icons 54 in Figure 2a) displayed on the display screen at the time the pointing device is operated (see page 10, line 1 through page 11, line 20). Furthermore, claim 23 provides that a direction in which the operational object can be moved on the display screen is determined according to the operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen (see page 12, lines 30-37; page 15, lines 6-13).

Independent claim 25 recites a mobile telephone (for example, mobile telephone 1 in Figures 12a-12b) that includes a pointing device (for example, pointing device 2 in Figures 14-

15) that can be operated to move an operational object (for example, a cursor, a pointer, or a selection frame, such as is illustrated in Figures 2a and 4a) on a display screen (for example, display screen 52 in Figures 12a-12b) in any 360-degree direction (see page 9, lines 14-34). The mobile telephone of claim 25 also includes a control unit (for example, control unit 12 in Figure 1) that changes an operation mode of the pointing device according to a positional orientation of contents (for example, icons 54 in Figure 2a) displayed on the display screen at the time said pointing device is operated (see page 10, line 1 through page 11, line 20). Furthermore, claim 25 provides that the control unit determines a direction in which the operational object can be moved on the display screen according to the operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen (see page 12, lines 30-37; page 15, lines 6-13).

Independent claim 35 recites a mobile communication apparatus (for example, mobile telephone 1 in Figures 12a-12b) that includes a pointing device (for example, pointing device 2 in Figures 14-15) configured to operate an operational object (for example, a cursor, a pointer, or a selection frame, such as is illustrated in Figures 2a and 4a) on a display screen (for example, display screen 52 in Figures 12a-12b) of the mobile communication apparatus. The mobile communication apparatus of claim 35 also includes a control unit (for example, control unit 12 in Figure 1) configured to switch an operation mode of the pointing device between a mode in which the operational object has 360-degree movement on the display screen and a mode in which the operational object is limited to less than 360-degree movement on the display screen according to an application that is running on the mobile communication apparatus at the time the pointing device is operated (see page 10, line 1 through page 11, line 20; page 12, lines 30-37; page 15, lines 6-13).

None of the claims contain an element expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL (37 C.F.R. § 41.37(c)(1)(vi))

Claims 1, 17, 19-20, 22-23, 25, 29, and 33-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0155857 ("Nishimoto") in view of Japanese Patent Publication 05181603 ("Hotta et al.") and U.S. Patent Application Publication No. 2002/0030668 ("Hoshino").

Claims 9-10, 24, 27-28, and 30-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0155857 ("Nishimoto") in view of Japanese Patent Publication 05181603 ("Hotta et al.") and U.S. Patent Application Publication No. 2002/0030668 ("Hoshino") and further in view of U.S. Patent No. 6,765,598 ("Kim").

Claim 35 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0155857 ("Nishimoto") in view of Japanese Patent Publication 05181603 ("Hotta et al.").

VII. ARGUMENT

A. Review of the prior art

1. U.S. Patent Application Publication No. 2002/0155857 ("Nishimoto")

Nishimoto is directed to a small-size mobile terminal that includes an optical sensor for reading an optical image of a finger that is kept in contact therewith installed below an LCD for displaying information. The optical sensor is provided with a light source for emitting a predetermined light beam toward a sensor window, a lens for converging light reflected by the finger that is in contact with the sensor window and an image sensor for detecting the converged light. A CPU shifts a pointer based upon the movement of the finger detected by the optical sensor (see Abstract).

2. Japanese Patent Publication 05181603 ("Hotta et al.")

Hotta et al. is directed to an information input device that precisely shifts the cursor on a display in a completely horizontal or vertical direction by operating the cursor while pressing a switch provided on a mouse. Hotta et al. requires that the user decide when to limit the movement of the cursor to either a completely horizontal or completely vertical movement by pressing an additional switch provided on the mouse (see Abstract).

3. U.S. Patent Application Publication No. 2002/0030668 ("Hoshino")

Hoshino is directed to a pointing device that is placed in a through hole provided on an outer case of a portable information terminal. The portable information terminal includes a fingerplate attached to a through hole via a hinge, an image pick-up element placed on a circuit board, a condensing lens that forms an image on an outer surface of the fingerplate on an image pick-up plane of the image pick-up element, and a light emitting device that irradiates the outer surface of the fingerplate with illumination light, and takes the image of a pattern such as a fingerprint of a fingertip that touches the outer surface of the fingerplate by using the image pick-up element. When the fingertip moves while touching the fingerplate, the image taken by the image pick-up element changes and the pointer displayed on a display screen is moved in a direction according to a change direction and by a distance corresponding to a quantity of change (see Abstract).

B. Claims 1, 17, 19-20, 22-23, 25, 29, and 33-34 are patentable over U.S. Patent Application Publication No. 2002/0155857 ("Nishimoto") in view of Japanese Patent Publication 05181603 ("Hotta et al.") and U.S. Patent Application Publication No. 2002/0030668 ("Hoshino")

In the final Office Action, the Examiner rejected claims 1, 17, 19-20, 22-23, 25, 29, and 33-34 over Nishimoto in view of Hotta et al. and Hoshino.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, alone or in combination, do not teach or suggest all the features of claim 1.

Claim 1 recites "a control unit changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated" and "wherein said control unit determines a direction in which said operational object can be moved on said display screen according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen" (lines 3-9). The Applicants respectfully submit that the cited art fails to teach these features.

The Examiner acknowledges, at page 5 of the final Office Action, that the combination of Nishimoto and Hotta et al. does not disclose a device wherein a control unit determines and changes the operation mode of the pointing device according to a positional orientation of the content. The Examiner attempts to make up for this deficiency with Hoshino. However, it is submitted that Hoshino fails to make up for this deficiency because Hoshino does not teach "changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated," as recited in claim 1. In the final Office Action, the Examiner points to paragraph [0094] and the abstract of Hoshino as teaching the above-discussed features of claim 1. In the Advisory Action mailed February 19, 2009, the Examiner points to paragraph [0014] of Hoshino as teaching the above-discussed features of claim 1. However, the applicants can find no disclosure in paragraphs [0014] and [0094] or the abstract of Hoshino that teaches "changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated."

Claim 1 provides a control unit for changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time the pointing device is operated. Furthermore, the control unit determines a direction in which the operational object can be moved on the display screen according to the operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen. Thus, claim 1 provides a pointing device that has a limited range of movement selected based upon the positional orientation of the current display on a display screen.

As a non-limiting example, when the invention of claim 1 is incorporated into the main control unit (CPU) of a device such as a mobile telephone, PDA, or the like, it is quite likely that the device will be capable of running many different applications in which it is desirable for the user to be able to move the pointing device in any direction, such as the Internet, games, etc. Thus, when one of these applications is running, the control unit of claim 1 allows the pointing device to move the operational object in any direction. The specification, at page 10, lines 21-28 as filed, states:

Typically, the pointing device can be operated in any direction. Thus, the operational object such as a cursor, a pointer or a selection frame can be moved in any direction corresponding to the operational direction of the pointing device. Therefore, such pointing device is also effective for operating the applications running on the mobile telephone such as the Internet and the games.

However, other applications that run on the device may contain more traditional interfaces in which icons are aligned in a straight line manner. When running these applications, it may be difficult to operate the operational object in any direction and, therefore, it is more desirable to limit movement of the operational object to only the directions in which the icons are arranged. In this situation, the control unit of claim 1 limits the movement of the operational object. As such, the control unit of claim 1 controls the functionality of the operational object based on the positional orientation of the contents displayed on the display screen just when the pointing device is operated. In other words, the control unit of claim 1 automatically changes the operational mode of the pointing device according to contents

displayed on the display screen. The specification, at page 10, line 29 through page 11, line 1 as filed, states:

As described above, in the mobile telephone, the icons are displayed as the menu in rows in vertical and/or horizontal directions on the display screen. Therefore, when the menu is displayed, it may be difficult to operate the operational object such as the cursor, the pointer or the selection frame if the operational object can be moved in any direction and, further, in view of the user's operability, it may be rather preferable if the operational object can be moved only in the direction in which the icons are arranged.

These features are not taught by Hoshino. Hoshino is merely directed to a pointing device on a portable information terminal (such as a mobile phone) in which a pick-up element for reading an image of a fingerprint is installed below a display screen (LCD-type screen) for displaying information. The pick-up element of the pointing device detects a difference in a position of a finger over a period of time (for example, from t1 to t2) and shifts a pointer corresponding to the detected change in the position of the finger. Hoshino refers to the fingerprints as images, but these images do not correspond to the "contents" of claim 1, as indicated by the Examiner. These fingerprint images are not on the display screen 3 of the device of Hoshino, but are instead read from the pick-up element 4c located below the display screen 3. Hoshino does not even discuss the orientation of content on the display screen 3 and, therefore, cannot provide for changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time said pointing device is operated, as provided by claim 1.

Paragraph [0014] of Hoshino, as relied on by the Examiner in the Advisory Action, merely recites "third means for detecting the movement of the image detected by the image detecting means and moving the pointer in the direction according to the direction of said detected movement and fourth means for determining the presence/absence of movement of the image detected by the image detecting means, setting the pointing device in an action mode when the movement is detected, moving the pointer in the direction according to the direction of the movement and setting the pointing device in a standby mode when the movement is not detected for a predetermined period of time, wherein the sensing frequency of the pointing device in the standby mode is smaller than the sensing frequency of the pointing device in the

action mode.” As such, this passage of Hoshino merely discusses switching between an action mode when movement is detected a standby mode when the movement is not detected. This passage of Hoshino contains no disclosure relating to changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time said pointing device is operated, as provided by claim 1.

Nishimoto, Hotta et al., and Hoshino, alone or in combination, do not teach all of the features of claim 1. Thus, Nishimoto, Hotta et al., and Hoshino, both individually and in combination, fail to render claim 1 unpatentable under 35 U.S.C. § 103(a).

Claims 17, 20, and 33-34 depend directly or indirectly on independent claim 1. These dependent claims contain each and every limitation of independent claim 1 and additional patentable limitations. Accordingly, the 35 U.S.C. § 103(a) rejection fails for these dependent claims for the same reasons it fails for independent claim 1.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, alone or in combination, do not teach or suggest all the features of claim 23.

Claim 23 recites “changing an operational mode of said pointing device in advance according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated” and “wherein a direction in which said operational object can be moved on said display screen is determined according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen” (lines 4-10). The Applicants respectfully submit that the cited art fails to teach these features.

The Examiner acknowledges, at page 7 of the final Office Action, that the combination of Nishimoto and Hotta et al. does not disclose a method wherein a control unit determines and changes the operation mode of the pointing device according to a positional orientation of the content. The Examiner attempts to make up for this deficiency with Hoshino. However, it is submitted that Hoshino fails to make up for this deficiency because Hoshino does not teach “changing an operational mode of said pointing device in advance according to a positional

orientation of contents displayed on said display screen at the time said pointing device is operated,” as recited in claim 23. In the final Office Action, the Examiner points to paragraph [0094] and the abstract of Hoshino as teaching the above-discussed features of claim 23. In the Advisory Action mailed February 19, 2009, the Examiner points to paragraph [0014] of Hoshino as teaching the above-discussed features of claim 23. However, the applicants can find no disclosure in paragraphs [0014] and [0094] or the abstract of Hoshino that teaches “changing an operational mode of said pointing device in advance according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated.”

Claim 23 provides for changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time the pointing device is operated. Furthermore, a direction in which the operational object can be moved on the display screen is determined according to the operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen. Thus, claim 23 provides a method for a pointing device that has a limited range of movement selected based upon the positional orientation of the current display on a display screen.

As a non-limiting example, when the invention of claim 23 is incorporated into the main control unit (CPU) of a device such as a mobile telephone, PDA, or the like, it is quite likely that the device will be capable of running many different applications in which it is desirable for the user to be able to move the pointing device in any direction, such as the Internet, games, etc. Thus, when one of these applications is running, claim 23 allows the pointing device to move the operational object in any direction. The specification, at page 10, lines 21-28 as filed, states:

Typically, the pointing device can be operated in any direction. Thus, the operational object such as a cursor, a pointer or a selection frame can be moved in any direction corresponding to the operational direction of the pointing device. Therefore, such pointing device is also effective for operating the applications running on the mobile telephone such as the Internet and the games.

However, other applications that run on the device may contain more traditional interfaces in which icons are aligned in a straight line manner. When running theses applications, it may be difficult to operate the operational object in any direction and, therefore, it

is more desirable to limit movement of the operational object to only the directions in which the icons are arranged. In this situation, claim 23 limits the movement of the operational object. As such, claim 23 controls the functionality of the operational object based on the positional orientation of the contents displayed on the display screen just when the pointing device is operated. In other words, claim 23 can automatically change the operational mode of the pointing device according to contents displayed on the display screen. The specification, at page 10, line 29 through page 11, line 1 as filed, states:

As described above, in the mobile telephone, the icons are displayed as the menu in rows in vertical and/or horizontal directions on the display screen. Therefore, when the menu is displayed, it may be difficult to operate the operational object such as the cursor, the pointer or the selection frame if the operational object can be moved in any direction and, further, in view of the user's operability, it may be rather preferable if the operational object can be moved only in the direction in which the icons are arranged.

These features are not taught by Hoshino. Hoshino is merely directed to a pointing device on a portable information terminal (such as a mobile phone) in which a pick-up element for reading an image of a fingerprint is installed below a display screen (LCD-type screen) for displaying information. The pick-up element of the pointing device detects a difference in a position of a finger over a period of time (for example, from t1 to t2) and shifts a pointer corresponding to the detected change in the position of the finger. Hoshino refers to the fingerprints as images, but these images do not correspond to the "contents" of claim 23, as indicated by the Examiner. These fingerprint images are not on the display screen 3 of the device of Hoshino, but are instead read from the pick-up element 4c located below the display screen 3. Hoshino does not even discuss the orientation of content on the display screen 3 and, therefore, cannot provide for changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time said pointing device is operated, as provided by claim 23.

Paragraph [0014] of Hoshino, as relied on by the Examiner in the Advisory Action, merely recites "third means for detecting the movement of the image detected by the image detecting means and moving the pointer in the direction according to the direction of said detected movement and fourth means for determining the presence/absence of movement of the image

detected by the image detecting means, setting the pointing device in an action mode when the movement is detected, moving the pointer in the direction according to the direction of the movement and setting the pointing device in a standby mode when the movement is not detected for a predetermined period of time, wherein the sensing frequency of the pointing device in the standby mode is smaller than the sensing frequency of the pointing device in the action mode.” As such, this passage of Hoshino merely discusses switching between an action mode when movement is detected a standby mode when the movement is not detected. This passage of Hoshino contains no disclosure relating to changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time said pointing device is operated, as provided by claim 23.

Nishimoto, Hotta et al., and Hoshino, alone or in combination, do not teach all of the features of claim 23. Thus, Nishimoto, Hotta et al., and Hoshino, both individually and in combination, fail to render claim 23 unpatentable under 35 U.S.C. § 103(a).

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, alone or in combination, do not teach or suggest all the features of claim 25.

Claim 25 recites “a control unit changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated” and “wherein said control unit determines a direction in which said operational object can be moved on said display screen according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen” (lines 4-10). The Applicants respectfully submit that the cited art fails to teach these features.

The Examiner acknowledges, at page 9 of the final Office Action, that the combination of Nishimoto and Hotta et al. does not disclose a device wherein a control unit determines and changes the operation mode of the pointing device according to a positional orientation of the content. The Examiner attempts to make up for this deficiency with Hoshino. However, it is submitted that Hoshino fails to make up for this deficiency because Hoshino does not teach “changing an operation mode of said pointing device according to a positional orientation of

contents displayed on said display screen at the time said pointing device is operated,” as recited in claim 25. In the final Office Action, the Examiner points to paragraph [0094] and the abstract of Hoshino as teaching the above-discussed features of claim 25. In the Advisory Action mailed February 19, 2009, the Examiner points to paragraph [0014] of Hoshino as teaching the above-discussed features of claim 25. However, the applicants can find no disclosure in paragraphs [0014] and [0094] or the abstract of Hoshino that teaches “changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated.”

Claim 25 provides a control unit for changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time the pointing device is operated. Furthermore, the control unit determines a direction in which the operational object can be moved on the display screen according to the operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen. Thus, claim 25 provides a pointing device that has a limited range of movement selected based upon the positional orientation of the current display on a display screen.

As a non-limiting example, when the invention of claim 25 is incorporated into the main control unit (CPU) of a device such as a mobile telephone, PDA, or the like, it is quite likely that the device will be capable of running many different applications in which it is desirable for the user to be able to move the pointing device in any direction, such as the Internet, games, etc. Thus, when one of these applications is running, the control unit of claim 25 allows the pointing device to move the operational object in any direction. The specification, at page 10, lines 21-28 as filed, states:

Typically, the pointing device can be operated in any direction. Thus, the operational object such as a cursor, a pointer or a selection frame can be moved in any direction corresponding to the operational direction of the pointing device. Therefore, such pointing device is also effective for operating the applications running on the mobile telephone such as the Internet and the games.

However, other applications that run on the device may contain more traditional interfaces in which icons are aligned in a straight line manner. When running theses

applications, it may be difficult to operate the operational object in any direction and, therefore, it is more desirable to limit movement of the operational object to only the directions in which the icons are arranged. In this situation, the control unit of claim 25 limits the movement of the operational object. As such, the control unit of claim 25 controls the functionality of the operational object based on the positional orientation of the contents displayed on the display screen just when the pointing device is operated. In other words, the control unit of claim 25 automatically changes the operational mode of the pointing device according to contents displayed on the display screen. The specification, at page 10, line 29 through page 11, line 1 as filed, states:

As described above, in the mobile telephone, the icons are displayed as the menu in rows in vertical and/or horizontal directions on the display screen. Therefore, when the menu is displayed, it may be difficult to operate the operational object such as the cursor, the pointer or the selection frame if the operational object can be moved in any direction and, further, in view of the user's operability, it may be rather preferable if the operational object can be moved only in the direction in which the icons are arranged.

These features are not taught by Hoshino. Hoshino is merely directed to a pointing device on a portable information terminal (such as a mobile phone) in which a pick-up element for reading an image of a fingerprint is installed below a display screen (LCD-type screen) for displaying information. The pick-up element of the pointing device detects a difference in a position of a finger over a period of time (for example, from t1 to t2) and shifts a pointer corresponding to the detected change in the position of the finger. Hoshino refers to the fingerprints as images, but these images do not correspond to the "contents" of claim 25, as indicated by the Examiner. These fingerprint images are not on the display screen 3 of the device of Hoshino, but are instead read from the pick-up element 4c located below the display screen 3. Hoshino does not even discuss the orientation of content on the display screen 3 and, therefore, cannot provide for changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time said pointing device is operated, as provided by claim 25.

Paragraph [0014] of Hoshino, as relied on by the Examiner in the Advisory Action, merely recites "third means for detecting the movement of the image detected by the image detecting

means and moving the pointer in the direction according to the direction of said detected movement and fourth means for determining the presence/absence of movement of the image detected by the image detecting means, setting the pointing device in an action mode when the movement is detected, moving the pointer in the direction according to the direction of the movement and setting the pointing device in a standby mode when the movement is not detected for a predetermined period of time, wherein the sensing frequency of the pointing device in the standby mode is smaller than the sensing frequency of the pointing device in the action mode." As such, this passage of Hoshino merely discusses switching between an action mode when movement is detected a standby mode when the movement is not detected. This passage of Hoshino contains no disclosure relating to changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time said pointing device is operated, as provided by claim 25.

Nishimoto, Hotta et al., and Hoshino, alone or in combination, do not teach all of the features of claim 25. Thus, Nishimoto, Hotta et al., and Hoshino, both individually and in combination, fail to render claim 25 unpatentable under 35 U.S.C. § 103(a).

Claim 29 depends directly or indirectly on independent claim 25. This dependent claim contains each and every limitation of independent claim 25 and additional patentable limitations. Accordingly, the 35 U.S.C. § 103(a) rejection fails for this dependent claim for the same reasons it fails for independent claim 25.

C. Claims 9-10, 24, 27-28, and 30-32 are patentable over U.S. Patent Application Publication No. 2002/0155857 ("Nishimoto") in view of Japanese Patent Publication 05181603 ("Hotta et al.") and U.S. Patent Application Publication No. 2002/0030668 ("Hoshino") and further in view of U.S. Patent No. 6,765,598 ("Kim")

In the final Office Action, the Examiner rejected claims 9-10, 24, 27-28, and 30-32 over Nishimoto in view of Hotta et al. and Hoshino and further in view of Kim.

Kim fails to make up for the deficiencies in the combination of Nishimoto, Hotta et al., and Hoshino noted above with respect to independent claims 1, 23, and 25. Claims 9-10, 24, 27-28, and 30-32 depend from these independent claims and include all the features of the respective independent claims, plus additional features which are not taught or suggested by the

prior art. Therefore, it is submitted that claims 9-10, 24, 27-28, and 30-32 patentably distinguish over the prior art for at least the reasons noted above.

D. Claim 35 is patentable over U.S. Patent Application Publication No. 2002/0155857 ("Nishimoto") in view of Japanese Patent Publication 05181603 ("Hotta et al.")

In the final Office Action, the Examiner rejected claim 35 over Nishimoto in view of Hotta et al.

It is submitted that the Examiner failed to establish a prima facie case of obviousness because the references, alone or in combination, do not teach or suggest all the features of claim 35.

Claim 35 recites "a control unit configured to switch an operation mode of the pointing device between a mode in which the operational object has 360-degree movement on the display screen and a mode in which the operational object is limited to less than 360-degree movement on the display screen according to an application that is running on the mobile communication apparatus at the time the pointing device is operated" (lines 4-8).

Claim 35 provides a control unit for changing an operation mode of the pointing device between a mode in which the operational object has 360-degree movement and a mode in which the operational object is limited to less than 360-degree movement, according to an application that is running on the mobile communication apparatus at the time the pointing device is operated. These features are not taught by the cited prior art. It is respectfully submitted that the Examiner has failed to address the limitation concerning limiting movement "according to an application that is running on the mobile communication apparatus at the time the pointing device is operated," as recited in claim 35.

As a non-limiting example, when the invention of claim 35 is incorporated into the main control unit (CPU) of a device such as a mobile telephone, PDA, or the like, it is quite likely that the device will be capable of running many different applications in which it is desirable for the user to be able to move the pointing device in any direction, such as the Internet, games, etc. Thus, when one of these applications is running, the control unit of claim 35 allows the pointing

device to move the operational object in any direction. The specification, at page 10, lines 21-28 as filed, states:

Typically, the pointing device can be operated in any direction. Thus, the operational object such as a cursor, a pointer or a selection frame can be moved in any direction corresponding to the operational direction of the pointing device. Therefore, such pointing device is also effective for operating the applications running on the mobile telephone such as the Internet and the games.

However, other applications that run on the device may contain more traditional interfaces in which icons are aligned in a straight line manner. When running these applications, it may be difficult to operate the operational object in any direction and, therefore, it is more desirable to limit movement of the operational object to only the directions in which the icons are arranged. In this situation, the control unit of claim 35 limits the movement of the operational object. As such, the control unit of claim 1 controls the functionality of the operational object based on the an application that is running on the mobile communication apparatus at the time the pointing device is operated. In other words, the control unit of claim 1 automatically changes the operational mode of the pointing device according to an application running on the mobile communication apparatus. The specification, at page 10, line 29 through page 11, line 1 as filed, states:

As described above, in the mobile telephone, the icons are displayed as the menu in rows in vertical and/or horizontal directions on the display screen. Therefore, when the menu is displayed, it may be difficult to operate the operational object such as the cursor, the pointer or the selection frame if the operational object can be moved in any direction and, further, in view of the user's operability, it may be rather preferable if the operational object can be moved only in the direction in which the icons are arranged.

Nishimoto and Hotta et al., alone or in combination, do not teach all of the features of claim 35. Thus, Nishimoto and Hotta et al., both individually and in combination, fail to render claim 35 unpatentable under 35 U.S.C. § 103(a).

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E. CONCLUSION

In summary, Applicant submits that claims 1, 9-10, 17, 20, 23-25, and 27-35 patentably distinguish over the prior art. Reversal of the Examiner's rejection is respectfully requested.

Respectfully submitted,

STAAS & HALSEY LLP

Date: _____

5/11/9

By: _____

J. Randall Bedders Reg No 130353
Aaron C. Walker

Aaron C. Walker

Registration No. 59,921

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501

VIII. CLAIMS APPENDIX (37 C.F.R. § 41.37(c)(1)(viii))

What is claimed is

1. (Previously Presented) A pointing device that can be operated to move an operational object on a display screen in any 360-degree direction, comprising:

a control unit changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated,

wherein said control unit determines a direction in which said operational object can be moved on said display screen according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen.

2 – 8. (Canceled)

9. (Previously Presented) A pointing device according to claim 30, wherein said moving amount adjusting means moves said operational object by the predetermined step value when the amount of operation of said pointing device takes the maximum value.

10. (Previously Presented) A pointing device according to claim 30, wherein said moving amount adjusting means move said operational object by the predetermined step value when the amount of operation of said pointing device exceeds a predetermined threshold value.

11-16. (Canceled)

17. (Original) A mobile telephone comprising a pointing device according to claim 1.

18-19. (Canceled)

20. (Original) A mobile telephone according to claim 17, wherein said control unit is constituted in a main control unit of said mobile telephone.

21-22. (Canceled)

23. (Previously Presented) A method for controlling a pointing device that can be operated to move an operational object on a display screen in any 360-degree direction, comprising the controlling step of:

changing an operational mode of said pointing device in advance according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated,

wherein a direction in which said operational object can be moved on said display screen is determined according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen.

24. (Previously Presented) A method for controlling a pointing device according to claim 31, wherein the pointing device can be operated to move said operational object at any speed, and wherein

said controlling step has the moving amount adjusting step of moving said operational object by a constant step value when said pointing device is operated in a predetermined operational mode.

25. (Previously Presented) A mobile telephone, comprising:

a pointing device that can be operated to move an operational object on a display screen in any 360-degree direction; and

a control unit changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated,

wherein said control unit determines a direction in which said operational object can be moved on said display screen according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen.

26. (Canceled)

27. (Previously Presented) A mobile telephone according to claim 32, wherein said moving amount adjusting means move said operational object by the predetermined step value when the amount of operation of said pointing device takes the maximum value.

28. (Previously Presented) A mobile telephone according to claim 27, wherein said moving amount adjusting means move said operational object by the predetermined step value when the amount of operation of said pointing device exceeds a predetermined threshold value.

29. (Previously Presented) A mobile telephone according to claim 25, wherein said control unit is constituted in a main control unit of said mobile telephone.

30. (Previously Presented) A mobile telephone according to claim 17, wherein said control unit defines the direction in advance in which said operational object can be moved on said display screen, as a current direction in which said pointing device can be operated and has a moving amount adjusting means for moving said operation object by a predetermined step value wherein the control unit outputs a signal to move the operational object in a predetermined manner in a menu representation on the display screen in accordance with a continuous signal from said pointing device for a predetermined time period.

31. (Previously Presented) A method according to claim 23, wherein said direction in which said operational object can be moved on said display screen is defined as a current direction in which said pointing device can be operated.

32. (Previously Presented) A mobile telephone according to claim 25, wherein said control unit defines the direction in which said operational object can be moved on said display screen as a current direction in which said pointing device can be operated and has a moving amount adjusting means for moving said operation object by a predetermined step value, wherein the control unit outputs a signal to move the operational object in a predetermined manner in the menu representation on the display screen in accordance with a continuous signal from said pointing device for a predetermined time period.

33. (Previously Presented) A pointing device according to claim 1, wherein when said display screen displays icons, the movement of the operational object is limited to only the direction in which the icons are arranged.

34. (Previously Presented) A pointing device according to claim 1, wherein based on the contents displayed on said display screen, the movement of the operational object is limited to one or more of horizontal, vertical or diagonal directions on the display screen.

35. (Previously Presented) A mobile communication apparatus, comprising:
a pointing device configured to operate an operational object on a display screen of the mobile communication apparatus; and
a control unit configured to switch an operation mode of the pointing device between a mode in which the operational object has 360-degree movement on the display screen and a mode in which the operational object is limited to less than 360-degree movement on the display screen according to an application that is running on the mobile communication apparatus at the time the pointing device is operated.

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IX. EVIDENCE APPENDIX (37 C.F.R. § 41.37(c)(1)(ix))

Not applicable

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X. RELATED PROCEEDING APPENDIX (37 C.F.R. § 41.37(c)(1)(x))

Not applicable